REMARKS/ARGUMENTS

Amendments

A number of the claims have been amended, as explained in detail below. Insofar as these amendments involve restriction of the claims, the amendments have been made in the interests of speedy prosecution, and without prejudice to Applicant's right to prosecute different and/or broader claims in a continuing application. For the record, it is also noted that Applicant intends to file one or more continuing applications to claim all aspects of the invention disclosed in this application but not claimed in the present claims.

Claim 1, and similarly all the other method claims, have been restricted to require

(a) the absence of exogenous ethylene during storage step (B),

(b) carrying out at least part of step (B) at about 14-18°C, and

(c) a step (C) in which the exterior of the sealed package is exposed to a second controlled atmosphere which contains at least 3% more oxygen than the first controlled atmosphere and an exogenous ethylenic ripening agent (ERA).

Thus, none of the method claims now claims a method in which

(a) ethylene is deliberately added to the initial packaging atmosphere present around the bananas, or

(b) a latent source of ERA is present within the sealed container, or

(c) the sealed container is sealed at room temperature and thereafter maintained at room temperature.

Claims 19 and 21, directed to containers containing a plurality of sealed packages and to sealed packages, respectively, have been amended so that each of these independent claims now specifies

(a) that the packaging atmosphere around the bananas comprises 1.5 to 6% O_2, less than 15% CO_2 , the total quantity of O_2 and CO_2 being less than 16%, and exogenous ethylene or a residue of exogenous ethylene;

(b) the sealed polymeric bag comprises at least one atmosphere control member which (i) provides a pathway for O_2, CO_2 and ethylene to enter or leave the packaging atmosphere, and (ii) comprises a microporous polymeric film and a polymeric coating on the microporous film; and

(c) the sealed polymeric bag has an O_2 permeability at 13 °C. per kg of bananas in the package (OP13/kg), of at least to 700 ml/atm.24 hrs and an R ratio at 13 °C of at least 3.

New dependent claims 22-26 have been added.

Basis for the significantly amended claims is shown in the Table below.

Amended Claim #	Basis in specification as filed
1	Claims 1 and 5; page 3, line 20, for "about 14°C; page 9, lines 6-8 (for a difference between the oxygen contents of at least 3%; page 33, lines 19-20, for the absence of ethylene during storage step (B)
4,5	Page 10, lines 24-27, for oxygen contents of 2-7 and 2-5 %
7,15	Page 28, lines 12-14 (for specified atmosphere); page 12, lines 1-8 (for OP13/kg value)
8,16, 22	Page 14, lines16-19 (for 2-5 lb)
11, 19, 21, 25 and 26	Page 20, lines 17-20 (for "polymeric bag")
19,21	Page 14, lines 16-19, for the specified atmosphere; page 24, lines 13-18, for the OP13/kg and EtP13/kg values.

The Rejection under 35 U.S.C. 103

Applicants respectfully traverse the rejection of claims 1-21 under 35 U.S.C. 103 as unpatentable over U.S. Patent No. 3,798,333 (hereinafter "Cummin") in view of Applicant's admission of the prior art, further in view of U.S. Patent No. 5,658,607 (hereinafter "Herdeman"), further in view of U.S. Patent No. 3,450,542 (hereinafter "Badran 542"), EP 752378 (hereinafter "Scolaro"), U.S. Patent No. 3,450,544

(hereinafter "Badran 544"), U.S. Patent No. 6,013,293 (hereinafter "De Moor"), U.S. Patent No. 4,842,875 (hereinafter "Anderson"), U.S. Patent No. 5,045,331 (hereinafter "Antoon 331") and JP 57-94244 (hereinafter Shimizu), insofar as the rejection is applicable to the amended claims.

The "secondary reference" relied upon by the Examiner is "Applicant's admission of the prior art". The Examiner has not specified what that alleged admission is, or where such admission is to be found. It is not possible, therefore, to carry out, either with regard to the alleged admission on its own or in combination with the other references, the actions mandated by MPEP 2141, e.g. the so-called Graham inquiries, in order to determine whether the conditions set out in 35 USC 103 have been met. The rejection should be withdrawn for that reason alone. If the Examiner maintains any rejection which relies on an alleged admission by the Applicant, he is asked to specify what that admission is and where it is to be found.

1. Patentability of the Method Claims

1(a) General

In each of the method claims 1-18, 25 and 26, there must be

(i) a first step (B) in which the sealed package containing green bananas is surrounded by a first controlled atmosphere which (i) contains 2-18% oxygen and (ii) is at a temperature between about 14 and 18°C; and

(ii) a second step (C) in which the exterior of the sealed package is exposed to a second controlled atmosphere which contains at least 3% more oxygen than the first controlled atmosphere, thereby ripening the bananas.

None of the references discloses a method in which a sealed package containing green bananas (or any other respiring biological material) is placed successively in different controlled atmospheres, neither of which is air, let alone in controlled atmospheres as defined in the claims.

1(b) Patentability of Claim 1.

A. There are at least the following differences between the primary reference, Cummin, and claim 1.

(1) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere containing 2-18% of oxygen. Cummin discloses only storing the sealed package in air, i.e. an atmosphere containing about 21% of oxygen, and does not disclose or suggest storing the sealed package in any atmosphere other than air, in particular an atmosphere containing 2-18% of oxygen.

(2) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere which is at a temperature of 14-18°C (as well as containing 2-18% of oxygen). Cummin discloses only storing the sealed package at ambient temperature, and does not disclose or suggest storing the sealed package at any temperature other than ambient, in particular at about 14-18°C.

(3) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ethylenic ripening agent (ERA), for example ethylene, thus ripening the bananas. Cummin discloses only exposing the exterior of the sealed package to

(a) air, i.e. an atmosphere containing about 21% of oxygen, which remains unchanged throughout the storage/ripening process (when the package already contains exogenous ethylene, as in all the specific Examples), or

(b) first to air and then to ethylene gas at atmospheric or super-atmospheric pressure (when the package does not already contains exogenous ethylene).

In case (b), whether the atmosphere contains only ethylene, or is a mixture of ethylene and air, the percentage of oxygen will be less than the 21% in the

previous atmosphere (air), rather than more than the previous atmosphere, as required by claim 1.

B. There are at least the following differences between Herdeman and claim 1.

(1) Claim 1 requires the presence of a sealed container which contains green bananas and provides a pathway for O_2, CO_2 and ethylene to enter or leave the packaging atmosphere within the sealed container. Herdeman's container does not provide such a pathway. It is essential that Herdeman's container should maintain the controlled atmosphere of low oxygen content which is introduced into the container (see, for example, claim 1, and column 5, lines 3-14).

(2) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Herdeman achieves ripening by means of ethylene added directly to the atmosphere within the sealed container, not by placing the sealed container in a controlled atmosphere containing ethylene. Thus in Herdeman's method, the ethylene which contacts and ripens the bananas has not passed through the walls of the container, whereas, in the method of claim 1, the ethylene which contacts and ripens the bananas has passed through the sealed container. As noted on page 27, lines 16-25, of the application, the method of the invention results in valuable improved results.

(3) Claim 1 requires that the packaging atmosphere in step (B) is free of exogenous ethylene. Herdeman requires the presence of ethylene.

C. There are at least the following differences between Badran 542 and claim 1.

(1) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere containing 2-18% of oxygen. Badran 542 discloses only storing the sealed package in air, i.e. an atmosphere containing about 21% of oxygen, and does not disclose or suggest storing the sealed package in any atmosphere other than air, in particular an atmosphere containing 2-18% of oxygen. The reduced O_2 and elevated CO_2 atmosphere referred to in

the Abstract of Badran 542 is the packaging atmosphere within the sealed package, not the atmosphere around the outside of the sealed package; the atmosphere outside the sealed package is air (see for example, column 2, lines 39-42, column 4, lines 10-19, and the specific Examples). As noted on page 27, lines 16-25, the method of the invention results in valuable improved results.

(2) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Badran 542, by contrast, discloses that the bag should be opened before the contents are exposed to air or other controlled ripening environment (see, for example, column 3, lines 36-38, the specific Examples and column 8, lines 39-43 and 62-64). As noted on page 27, lines 16-25, of the application, the method of the invention results in valuable improved results.

D. There are at least the following differences between Scolaro and claim 1.

(1) Claim 1 requires the presence of a sealed container which contains green bananas and provides a pathway for O_2, CO_2 and ethylene to enter or leave the packaging atmosphere within the sealed container. Scolaro's container does not provide such a pathway. It is essential that Scolaro's container should maintain substantially constant the composition of the modified atmosphere which is introduced into the container before it is sealed around the green bananas, and for this purpose it is hermetically sealed (see, for example, column 3, lines 11-20).

(2) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere which is at a temperature of about 14-18°C (as well as containing 2-18% of oxygen). Scolaro discloses only storing the sealed package at ambient temperature (see column 1, lines 54-55, column 2, line 5, and column 3, lines 18-20) and does not disclose or suggest storing the sealed package at any temperature other than ambient, in particular at about 14-18°C.

(3) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Thus, in the method of claim 1, the ERA which contacts and ripens the bananas has passed through the sealed container. Scolaro achieves ripening by opening the container (see column 2, lines 6-7, and column 3, lines 20-24). As noted on page 27, lines 16-25, of the application, the method of the invention results in valuable improved results.

E. There are at least the following differences between claim 1 and Badran 544.

(1) Claim 1 requires green bananas. Badran 544 is principally concerned with climacteric fruit which, unlike bananas, fail to ripen properly if packaged in sealed containers before the climacteric (column 1, line 61-column 2, line 2), and in consequence warns "Packaging of climacteric produce of the type referred to in this application at any time before the climacteric rise... has not been found to result in satisfactory storage life.... It is essential, therefore, to package the produce *after* the onset of the climacteric..." (column 4, lines 1-17). The disclosure in Badran 544 about bananas is concerned only with ripe bananas (column 4, line 67, column 13, line 55-column 14, line 35, and claim 11), i.e. not with green bananas.

(2) Badran 544 fails to disclose any of the other features of claim 1, with the exception that Badran does disclose a sealed container providing a pathway for O_2, CO_2 and ethylene to enter or leave the packaging atmosphere within the sealed container.

F. There are at least the following differences between claim 1 and De Moor.

(1) Claim 1 requires green bananas. De Moor makes no reference to bananas of any kind.

(2) De Moor fails to disclose all the other features of claim 1, with the exception that De Moor does disclose a sealed container providing a pathway for

O_2, CO_2 and ethylene to enter or leave the packaging atmosphere within the sealed container.

G. There are at least the following differences between Antoon 331 and claim 1.

(1) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere containing 2-18% of oxygen. Antoon 331 discloses only storing the sealed package in air, i.e. an atmosphere containing about 21% of oxygen, and does not disclose or suggest storing the sealed package in any atmosphere other than air, in particular an atmosphere containing 2-18% of oxygen.

(2) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Antoon 331 does not disclose or suggest any such step.

H. There are at least the following differences between Anderson and claim 1.

(1) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere containing 2-18% of oxygen. Anderson discloses only storing the sealed package in air, i.e. an atmosphere containing about 21% of oxygen, and does not disclose or suggest storing the sealed package in any atmosphere other than air, in particular an atmosphere containing 2-18% of oxygen.

(2) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Anderson does not disclose or suggest any such step.

I. There are at least the following differences between Shimizu and claim 1.

(1) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere containing 2-18% of oxygen. Shimizu discloses only storing the sealed package in air, i.e. an atmosphere containing

about 21% of oxygen, and does not disclose or suggest storing the sealed package in any atmosphere other than air, in particular an atmosphere containing 2-18% of oxygen.

(2) Claim 1 requires the defined step (B), in which the sealed package is stored in a first controlled atmosphere which is at a temperature of 14-18°C (as well as containing 2-18% of oxygen). Shimizu discloses only storing the sealed package at ambient temperature, and does not disclose or suggest storing the sealed package at any temperature other than ambient, in particular at 14-18°C.

(3) Claim 1 requires the defined step (C), in which, after step (B), the exterior of the sealed package is exposed to a second controlled atmosphere containing at least 3% more oxygen than the first controlled atmosphere, and an ERA , thus ripening the bananas. Shimizu discloses no such step, the contents of Shimizu's sealed package being ripened by ethylene adsorbed onto an absorbent within the sealed package. Thus, in the method of claim 1, the ERA which contacts and ripens the bananas has passed through the sealed container, whereas in Shimizu the ethylene has not passed through the sealed container. As noted on page 27, lines 16-25, of the application, the method of the invention results in valuable improved results.

The Office Action states

As Applicant's admission of the prior art, Badran, Scolaro, Badran et al, De Moor, Anderson and Antoon attest to, the application of gas-permeable packages to modified atmospheres to slow down ripening and increase storage life of produce including bananas is notoriously old.

Taken on its own, this statement might be read as an assertion that it is known to place sealed gas-permeable packages containing respiring biological material in atmospheres other than air. If that was the intended meaning of that statement, Applicant submits that there is no basis for such an assertion in the references relied upon, or elsewhere in the prior art. However, the Office Action also states, a little later (emphasis added)

Claim 1 ***further*** *recites that the sealed packages stored in a controlled atmosphere of oxygen and carbon dioxide. This phrase appears to mean that*

the atmosphere surrounding the sealed package is in the recited concentration range.

This further statement indicates that the Examiner agrees that "Applicant's submission of the prior art, Badran, Scolaro, Badran et al., De Moor, Anderson and Antoon" do not disclose placing a gas-permeable package containing a respiring biological material in an atmosphere other than air.

The Office Action then continues

Applicant's admission of the prior art as further evidenced by the art taken as a whole including e.g. Herdeman discloses controlled atmosphere storage of produce is conventional. It is noted that the recited concentration ranges read on the disclosed amounts of oxygen generally recognized by the art taken as a whole as levels of oxygen for good storage life. To store the sealed oxygen-permeable package in the controlled atmosphere is seen to have been obvious in view of the art taken as a whole with its teaching of reducing oxygen upon initiation of ripening (e.g. Herdeman).

Herdeman discloses methods in which a modified atmosphere is injected into a container in which bananas are directly contacted by the modified atmosphere. Neither Herdeman nor any of the other references discloses or suggests any method in which a sealed package is surrounded by an atmosphere having a reduced (i.e. less than about 21%) oxygen content. The rejection depends, therefore, on the Examiner's assertion that

To store the sealed oxygen-permeable package in the controlled atmosphere is seen to have been obvious in view of the art taken as a whole with its teaching of reducing oxygen upon initiation of ripening.

It is submitted that there is no basis for this assumption, which is essential to the rejection, and that the rejection should, therefore, be withdrawn. As MPEP 2144.03 notes, quoting from Zurko, 59 USPQ 2d at 1697

"The Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common

sense. Rather, the Board must point to some concrete evidence in the record in support of these findings".

The Examiner, who is of course under the same obligations as the Board, has not pointed to any such concrete evidence.

Applicant submits that, in view of the facts and arguments set out above, the Examiner has failed to establish a prima facie case for the rejection of claim 1 under 35 USC 103.

1(c) Patentability of other method claims

It is clear that if Claim 1 is patentable, as Applicant submits, so also are the other method claims, which are of more restricted scope. However, for the sake of completeness, Applicant notes the following non-comprehensive list of features taken from the other method claims which are further distinguished from the references and which are relied upon for the independent patentability of the claims in question.

(1) The use of a first controlled atmosphere containing 4-12% oxygen (claims 2 and 11), preferably 5-9% oxygen (claim 3).

(2) The packaging atmosphere, for part of the period before the bananas reach their climacteric (i.e. before the bananas have reached the maximum rate of respiration which characterizes the ripening of bananas and other climacteric fruits), contains 14-19% of oxygen; and the sealed container has (i) an O_2 permeability at 13 °C. per kg of bananas in the package (OP13/kg), of at least 700 ml/atm.24 hrs, and (ii) an ethylene permeability at 13 °C. per kg of bananas in the package (EtOP13/kg) which is at least 3 times the OP13/kg of the container (claims 7 and 15). These conditions are contrary to the teaching of the prior art, for substantially the same reasons as are explained in detail in the Reply (filed contemporaneously) to the final Office Action on the parent application, in which the conditions are part of claim 11 (the only independent claim) of the parent application.

(3) The package contains 16-22 kg of bananas (claims 9 and 17). The method proposed in the primary reference, Cummin, requires the use of extremely thin polymeric films which could not practically be used to contain 16-22 kg of bananas.

(4) The container is a polymeric bag (claims 11, 25 and 26). The primary reference, Cummin, requires the use of extremely thin polymeric films. Even when packing the small quantities of bananas disclosed by Cummin, such polymeric films, cannot practically be used in the form of preformed bags, and must be wrapped around the bananas while the bananas are supported by a support tray.

(5) The sole contents of the sealed container are the bananas and the packaging atmosphere around the bananas (claims 25 and 26). As noted above, the primary reference, Cummin, requires the use of a support tray which thus becomes part of the contents of the sealed container. The zeolite (or other adsorbent) used by Shimizu as a carrier for ethylene will be part of the contents of Shimizu's sealed container.

(6) The sealed container comprises at least one atmosphere control member comprising a microporous polymeric film and a polymeric coating on the microporous film (claim 11). The primary reference, Cummin, does not disclose or suggest such an atmosphere control member.

2. Patentability of Claims 19 and 21

A. There are at least the following differences between (i) claims 19 and 21, and (ii) Shimizu, which is used as the primary reference for the rejection of these claims.

(1). Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Shimizu.

(2) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Shimizu of such a polymeric bag.

(3) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than

15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Shimizu of an atmosphere containing such quantities of oxygen and carbon dioxide.

B. There are at least the following differences between (i) claims 19 and 21, and (ii) Cummin.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Cummin.

(2) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Cummin of such a polymeric bag.

(3) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Cummin of an atmosphere containing such quantities of oxygen and carbon dioxide around bananas which have passed their climacteric.

C. There are at least the following differences between (i) claims 19 and 21, and (ii) Herdeman.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Herdeman.

(2) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Herdeman of such a polymeric bag.

D. There are at least the following differences between (i) claims 19 and 21, and (ii) Badran 542

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Badran 542.

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Badran 542 of a sealed bag which contains such an atmosphere, in particular one which contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Badran 542 of such a polymeric bag.

E. There are at least the following differences between (i) claims 19 and 21, and (ii) Scolaro.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Scolaro, and the use of such a member would be contrary to Scolaro's teaching that the "composition of the modified atmosphere remains substantially constant".

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Scolaro of a sealed bag in which the atmosphere contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Scolaro of such a polymeric bag.

F. There are at least the following differences between (i) claims 19 and 21, and (ii) Badran 544.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. No such atmosphere control member is disclosed by Badran 544.

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Badran 544 of a sealed bag in which the atmosphere contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Badran 544 of such a polymeric bag.

G. There are at least the following differences between (i) claims 19 and 21, and (ii) De Moor.

(1) Claims 19 and 21 require that the sealed polymeric bag should include bananas which have passed their climacteric. There is no reference to bananas in De Moor.

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in De Moor of a sealed bag in which the atmosphere contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in De Moor of such a polymeric bag.

H. There are at least the following differences between (i) claims 19 and 21, and (ii) Antoon 331.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. The atmosphere control member disclosed by Antoon 331 is composed of a non-woven material and a polymeric coating on the non-woven material.

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Antoon 331 of a sealed bag in which the atmosphere contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Antoon 331 of such a polymeric bag.

I. There are at least the following differences between (i) claims 19 and 21, and (ii) Anderson.

(1) Claims 19 and 21 require that the sealed polymeric bag should include an atmosphere control member which comprises a microporous polymeric film and a polymeric coating on the microporous film. The atmosphere control member disclosed by Anderson is composed of a microporous polymeric film but there is no polymeric coating on the microporous film.

(2) Claims 19 and 21 require that the packaging atmosphere around bananas which have passed their climacteric should comprise 1.5 to 6% oxygen, less than 15% carbon dioxide, the total quantity of oxygen and carbon dioxide being less

than 16%, and exogenous ethylene or the residue of exogenous ethylene. There is no disclosure in Anderson of a sealed bag in which the atmosphere contains exogenous ethylene or the residue of exogenous ethylene.

(3) Claims 19 and 21 require that the sealed polymeric bag should have an oxygen permeability at 13°C per kg of bananas (OP13/kg) of at least 700 ml/atm.24hr. There is no disclosure in Anderson of such a polymeric bag.

The rejection depends on the Examiner's assertion that

The remainder of the art taken as a whole can be relied on as above to teach the manipulation of the well known produce storage variables of weight, permeability etc.

It is submitted that there is no basis for this assertion, which is essential to the rejection, and that the rejection should, therefore, be withdrawn. As MPEP 2144.03 notes, quoting from Zurko, 59 USPQ 2d at 1697

"The Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings".

The Examiner, who is of course under the same obligations as the Board, has not pointed to any such concrete evidence.

Applicant submits that, in view of the facts and arguments set out above, the Examiner has failed to establish a prima facie case for the rejection of claims 19 and 21 under 35 USC 103.

1(c) Patentability of claims dependent on claims 19 and 21

It is clear that if claims 19 and 21 are patentable, as Applicant submits, so also are the claims dependent on them, which are of more restricted scope. However, for the sake of completeness, Applicant notes claims 23 and 24 require that the bananas and the packaging atmosphere are the sole contents of the sealed polymeric bag. This

feature further distinguishes these claims from the references, and is relied upon for the independent patentability of the claims in question. Thus,

(1) Shimizu requires that an adsorbent, e.g. a zeolite, on which ethylene is adsorbed, should be placed within the container before it is sealed around the bananas (or other vegetable or fruit).

(2) Cummin requires the use of a support tray within the sealed container, because the extremely thin films used by Cummin cannot practically be used in the form of preformed bags, and must be wrapped around the bananas while the bananas are supported by a support tray.

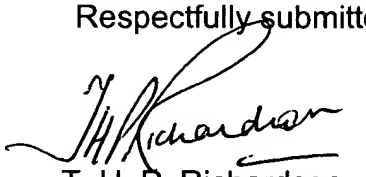
Continuation Application(s)

For the record, Applicant notes that it is his intention to file one or more continuing applications to claim the aspects of the invention disclosed in this application and not specifically claimed in the present claims.

CONCLUSION

It is believed that this application is now in condition for allowance, and applicant respectfully requests that a timely Notice of Allowance be issued in this case. If, however, there are any outstanding issues that could usefully be discussed by telephone, the Examiner is asked to call the undersigned.

Respectfully submitted



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